

-1-

SEQUENCE LISTING

<110> Epimmune Inc.
Ishioka, Glenn
Fikes, John
Tangri, Shabnam
Sette, Alessandro

<120> Heteroclitic Analogs and Related Methods

<130> 2060.009PC05

<150> US 60/413,471

<151> 2002-09-26

<150> US 10/116,118

<151> 2002-04-05

<160> 196

<170> PatentIn version 3.2

<210> 1

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 1

Ile Met Ile Gly Val Leu Val Gly Val
1 5

<210> 2

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 2

Ile Met Met Gly Val Leu Val Gly Val
1 5

<210> 3

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

-2-

<400> 3

Ile Met Ile Gly His Leu Val Gly Val
1 5

<210> 4

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 4

Lys Val Ala Glu Leu Val His Phe Leu
1 5

<210> 5

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 5

Lys Val Ala Glu Ile Val His Phe Leu
1 5

<210> 6

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 6

Lys Val Ala Glu Leu Val Trp Phe Leu
1 5

<210> 7

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 7

Tyr Leu Gln Leu Val Phe Gly Ile Glu Val
1 5 10

-3-

<210> 8
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 8

Tyr Leu Gln Leu Ile Phe Gly Ile Glu Val
1 5 10

<210> 9
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 9

Tyr Leu Gln Leu Phe Phe Gly Ile Glu Val
1 5 10

<210> 10
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 10

His Leu Phe Gly Tyr Ser Trp Tyr Lys
1 5

<210> 11
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 11

His Leu Phe Pro Tyr Ser Trp Tyr Lys
1 5

<210> 12
<211> 9
<212> PRT
<213> Artificial Sequence

-4-

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 12

His Leu Phe Ile Tyr Ser Trp Tyr Lys
1 5

<210> 13
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 13

His Leu Phe Gly Tyr Ser Leu Tyr Lys
1 5

<210> 14
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 14

His Leu Phe Gly Tyr Ser Met Tyr Lys
1 5

<210> 15
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 15

His Leu Phe Gly Tyr Ser Ile Tyr Lys
1 5

<210> 16
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic

-5-

antigen

<400> 16

His Leu Phe Gly Tyr Ser Asp Tyr Lys
1 5

<210> 17

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 17

His Leu Phe Gly Tyr Ser Gly Tyr Lys
1 5

<210> 18

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 18

His Leu Phe Gly Tyr Ser Cys Tyr Lys
1 5

<210> 19

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 19

His Leu Phe Gly Tyr Ser Asn Tyr Lys
1 5

<210> 20

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 20

-6-

Glu Tyr Leu Gln Leu Val Phe Gly Ile
1 5

<210> 21
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 21

Glu Tyr Ile Gln Leu Val Phe Gly Ile
1 5

<210> 22
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 22

Glu Tyr Leu Glu Leu Val Phe Gly Ile
1 5

<210> 23
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 23

Glu Tyr Leu Leu Leu Val Phe Gly Ile
1 5

<210> 24
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 24

Glu Tyr Leu Gln Leu Met Phe Gly Ile
1 5

<210> 25
<211> 9

-7-

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens
<400> 25

Glu Tyr Leu Gln Leu Leu Phe Gly Ile
1 5

<210> 26
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Clostridium tetani
<400> 26

Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu
1 5 10

<210> 27
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Plasmodium falciparum
<400> 27

Asp Ile Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe
1 5 10 15

Asn Val Val Asn Ser
20

<210> 28
<211> 16
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Streptococcus sp.
<400> 28

Gly Ala Val Asp Ser Ile Leu Gly Gly Val Ala Thr Tyr Gly Ala Ala
1 5 10 15

<210> 29
<211> 13
<212> PRT
<213> Unknown

-8-

<220>
<223> Synthetic T helper peptide

<220>
<221> misc_feature
<222> (1)..(1)
<223> Xaa can be either D-alanine or L-alanine

<220>
<221> misc_feature
<222> (3)..(3)
<223> Xaa is cyclohexylalanine

<220>
<221> misc_feature
<222> (13)..(13)
<223> Xaa can be either D-alanine or L-alanine

<400> 29

Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Ala
1 5 10

<210> 30
<211> 13
<212> PRT
<213> Unknown

<220>
<223> Synthetic T helper peptide

<220>
<221> misc_feature
<222> (1)..(1)
<223> Xaa can be either D-alanine or L-alanine

<220>
<221> misc_feature
<222> (3)..(3)
<223> Xaa is phenylalanine

<220>
<221> misc_feature
<222> (13)..(13)
<223> Xaa can be either D-alanine or L-alanine

<400> 30

Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Ala
1 5 10

<210> 31
<211> 13
<212> PRT
<213> Unknown

<220>
<223> Synthetic T helper peptide

-9-

<220>
<221> misc_feature
<222> (1)..(1)
<223> Xaa can be either D-alanine or L-alanine

<220>
<221> misc_feature
<222> (3)..(3)
<223> Xaa is tyrosine

<220>
<221> misc_feature
<222> (13)..(13)
<223> Xaa can be either D-alanine or L-alanine

<400> 31

Ala Lys Xaa Val Ala Ala Trp Thr Leu Lys Ala Ala Ala
1 5 10

<210> 32
<211> 9
<212> PRT
<213> Unknown

<220>
<223> Synthetic peptide

<400> 32

Ala Pro Ala Ala Ala Ala Ala Tyr
1 5

<210> 33
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Human Leukocyte
Antigen

<400> 33

Lys Val Phe Pro Tyr Ala Leu Ile Asn Lys
1 5 10

<210> 34
<211> 13
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Hepatitis B Virus

<400> 34

Thr Pro Pro Ala Tyr Arg Pro Pro Asn Ala Pro Ile Leu
1 5 10

-10-

<210> 35
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Hepatitis B Virus

<400> 35

Phe Leu Pro Ser Asp Phe Phe Pro Ser Val
1 5 10

<210> 36
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Human Leukocyte
Antigen

<400> 36

Ala Pro Arg Thr Leu Val Tyr Leu Leu
1 5

<210> 37
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Human Leukocyte
Antigen

<400> 37

Ala Pro Glu Thr Leu Val Tyr Leu Leu
1 5

<210> 38
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Human Leukocyte
Antigen

<400> 38

Ala Pro Arg Thr Trp Val Tyr Leu Leu
1 5

<210> 39
<211> 9

-11-

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Human Leukocyte
Antigen

<400> 39

Ala Pro Arg Thr Leu Val Pro Leu Leu
1 5

<210> 40
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Human Leukocyte
Antigen

<400> 40

Lys Val His Pro Tyr Ala Leu Ile Asn Lys
1 5 10

<210> 41
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Human Leukocyte
Antigen

<400> 41

Lys Val Phe Pro Gln Ala Leu Ile Asn Lys
1 5 10

<210> 42
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Human Leukocyte
Antigen

<400> 42

Lys Val Phe Pro Tyr Ala Lys Ile Asn Lys
1 5 10

<210> 43
<211> 9
<212> PRT
<213> Artificial Sequence

-12-

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 43

Val Pro Ile Ser His Leu Tyr Ile Leu
1 5

<210> 44

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 44

Val Pro Ile Ser His Leu His Ile Leu
1 5

<210> 45

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 45

Val Pro Ile Ser His Leu Met Ile Leu
1 5

<210> 46

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 46

Val Pro Ile Ser His Leu Gly Ile Leu
1 5

<210> 47

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 47

Val Pro Ile Ser His Leu Glu Ile Leu

-13-

1 5

<210> 48
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 48

Val Pro Ile Ser His Leu Asp Ile Leu
1 5

<210> 49
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

<400> 49

Ser Met Pro Pro Pro Gly Thr Arg Val
1 5

<210> 50
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

<400> 50

Cys Met Pro Pro Pro Gly Thr Arg Val
1 5

<210> 51
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

<400> 51

Ser Met Pro Pro Pro Gly Pro Arg Val
1 5

<210> 52
<211> 11
<212> PRT

-14-

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens p53

<400> 52

Gly Leu Ala Pro Pro Gln His Leu Ile Arg Val
1 5 10

<210> 53

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens p53

<400> 53

Gly Leu Thr Pro Pro Gln His Leu Ile Arg Val
1 5 10

<210> 54

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens p53

<400> 54

Gly Leu Thr Pro Pro Glu His Leu Ile Arg Val
1 5 10

<210> 55

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Hepatitis B Virus

<400> 55

Gly Leu Ser Arg Tyr Val Ala Arg Leu
1 5

<210> 56

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Hepatitis B Virus

<400> 56

-15-

Gly Leu Ser Arg Tyr Val Pro Arg Leu
1 5

<210> 57
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Human Immunodeficiency Virus

<400> 57

Ile Leu Lys Glu Pro Val His Gly Val
1 5

<210> 58
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Human Immunodeficiency Virus

<400> 58

Ile Leu His Glu Pro Val His Gly Val
1 5

<210> 59
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Human Immunodeficiency Virus

<400> 59

Ile Leu Leu Glu Pro Val His Gly Val
1 5

<210> 60
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

<400> 60

Leu Leu Gly Arg Asp Ser Phe Glu Val
1 5

<210> 61
<211> 9

-16-

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

<400> 61

Leu Leu Asp Arg Asp Ser Phe Glu Val
1 5

<210> 62
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

<400> 62

Leu Leu His Arg Asp Ser Phe Glu Val
1 5

<210> 63
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

<400> 63

Leu Leu Gly Arg Asp Ser Leu Glu Val
1 5

<210> 64
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

<400> 64

Leu Leu Gly Arg Asp Ser His Glu Val
1 5

<210> 65
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

-17-

<400> 65

Leu Leu Gly Arg Asn Ser Phe Glu Val
 1 5

<210> 66

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens p53

<400> 66

Leu Leu Gly Arg Gly Ser Phe Glu Val
 1 5

<210> 67

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Human Immunodeficiency Virus

<400> 67

Ile Leu Ile Glu Pro Val His Gly Val
 1 5

<210> 68

<211> 702

<212> PRT

<213> Homo sapiens

<400> 68

Met Glu Ser Pro Ser Ala Pro Pro His Arg Trp Cys Ile Pro Trp Gln
 1 5 10 15

Arg Leu Leu Leu Thr Ala Ser Leu Leu Thr Phe Trp Asn Pro Pro Thr
 20 25 30

Thr Ala Lys Leu Thr Ile Glu Ser Thr Pro Phe Asn Val Ala Glu Gly
 35 40 45

Lys Glu Val Leu Leu Leu Val His Asn Leu Pro Gln His Leu Phe Gly
 50 55 60

Tyr Ser Trp Tyr Lys Gly Glu Arg Val Asp Gly Asn Arg Gln Ile Ile
 65 70 75 80

Gly Tyr Val Ile Gly Thr Gln Gln Ala Thr Pro Gly Pro Ala Tyr Ser

-18-

				85						90						95
Gly	Arg	Glu	Ile	Ile	Tyr	Pro	Asn	Ala	Ser	Leu	Leu	Ile	Gln	Asn	Ile	
			100					105					110			
Ile	Gln	Asn	Asp	Thr	Gly	Phe	Tyr	Thr	Leu	His	Val	Ile	Lys	Ser	Asp	
		115					120					125				
Leu	Val	Asn	Glu	Glu	Ala	Thr	Gly	Gln	Phe	Arg	Val	Tyr	Pro	Glu	Leu	
	130					135					140					
Pro	Lys	Pro	Ser	Ile	Ser	Ser	Asn	Asn	Ser	Lys	Pro	Val	Glu	Asp	Lys	
145					150					155					160	
Asp	Ala	Val	Ala	Phe	Thr	Cys	Glu	Pro	Glu	Thr	Gln	Asp	Ala	Thr	Tyr	
				165					170					175		
Leu	Trp	Trp	Val	Asn	Asn	Gln	Ser	Leu	Pro	Val	Ser	Pro	Arg	Leu	Gln	
			180					185					190			
Leu	Ser	Asn	Gly	Asn	Arg	Thr	Leu	Thr	Leu	Phe	Asn	Val	Thr	Arg	Asn	
		195					200					205				
Asp	Thr	Ala	Ser	Tyr	Lys	Cys	Glu	Thr	Gln	Asn	Pro	Val	Ser	Ala	Arg	
	210					215					220					
Arg	Ser	Asp	Ser	Val	Ile	Leu	Asn	Val	Leu	Tyr	Gly	Pro	Asp	Ala	Pro	
225					230					235					240	
Thr	Ile	Ser	Pro	Leu	Asn	Thr	Ser	Tyr	Arg	Ser	Gly	Glu	Asn	Leu	Asn	
				245					250					255		
Leu	Ser	Cys	His	Ala	Ala	Ser	Asn	Pro	Pro	Ala	Gln	Tyr	Ser	Trp	Phe	
			260					265					270			
Val	Asn	Gly	Thr	Phe	Gln	Gln	Ser	Thr	Gln	Glu	Leu	Phe	Ile	Pro	Asn	
		275					280					285				
Ile	Thr	Val	Asn	Asn	Ser	Gly	Ser	Tyr	Thr	Cys	Gln	Ala	His	Asn	Ser	
	290					295					300					
Asp	Thr	Gly	Leu	Asn	Arg	Thr	Thr	Val	Thr	Thr	Ile	Thr	Val	Tyr	Ala	
305					310					315					320	
Glu	Pro	Pro	Lys	Pro	Phe	Ile	Thr	Ser	Asn	Asn	Ser	Asn	Pro	Val	Glu	
				325					330					335		

-19-

Asp Glu Asp Ala Val Ala Leu Thr Cys Glu Pro Glu Ile Gln Asn Thr
 340 345 350

Thr Tyr Leu Trp Trp Val Ile Ile Arg Ser Leu Pro Val Ser Pro Arg
 355 360 365

Leu Gln Leu Ser Asn Asp Asn Arg Thr Leu Thr Leu Leu Ser Val Thr
 370 375 380

Arg Asn Asp Val Gly Pro Tyr Glu Cys Gly Ile Gln Asn Glu Leu Ser
 385 390 395 400

Val Asp His Ser Asp Pro Val Ile Leu Asn Val Leu Tyr Gly Pro Asp
 405 410 415

Asp Pro Thr Ile Ser Pro Ser Tyr Thr Tyr Tyr Arg Pro Gly Val Asn
 420 425 430

Leu Ser Leu Ser Cys His Ala Ala Ser Asn Pro Pro Ala Gln Tyr Ser
 435 440 445

Trp Leu Ile Asp Gly Asn Ile Gln Gln His Thr Gln Glu Leu Phe Ile
 450 455 460

Ser Asn Ile Thr Glu Lys Asn Ser Gly Leu Tyr Thr Cys Gln Ala Asn
 465 470 475 480

Asn Ser Ala Ser Gly His Ser Arg Thr Thr Val Lys Thr Ile Thr Val
 485 490 495

Ser Ala Glu Leu Pro Lys Pro Ser Ile Ser Ser Asn Asn Ser Lys Pro
 500 505 510

Val Glu Asp Lys Asp Ala Val Ala Phe Thr Cys Glu Pro Glu Ala Gln
 515 520 525

Asn Thr Thr Tyr Leu Trp Trp Val Asn Gly Gln Ser Leu Pro Val Ser
 530 535 540

Pro Arg Leu Gln Leu Ser Asn Gly Asn Arg Thr Leu Thr Leu Phe Asn
 545 550 555 560

Val Thr Arg Asn Asp Ala Arg Ala Tyr Val Cys Gly Ile Gln Asn Ser
 565 570 575

Val Ser Ala Asn Arg Ser Asp Pro Val Thr Leu Asp Val Leu Tyr Gly
 580 585 590

-20-

Pro Asp Thr Pro Ile Ile Ser Pro Pro Asp Ser Ser Tyr Leu Ser Gly
 595 600 605

Ala Asn Leu Asn Leu Ser Cys His Ser Ala Ser Asn Pro Ser Pro Gln
 610 615 620

Tyr Ser Trp Arg Ile Asn Gly Ile Pro Gln Gln His Thr Gln Val Leu
 625 630 635 640

Leu Ile Ala Lys Ile Gln Pro Asn Asn Asn Gly Thr Tyr Ala Cys Phe
 645 650 655

Val Ser Asn Leu Ala Thr Gly Arg Asn Asn Ser Ile Val Lys Ser Ile
 660 665 670

Thr Val Ser Ala Ser Gly Thr Ser Pro Gly Leu Ser Ala Gly Ala Thr
 675 680 685

Ala Gly Ile Met Ile Gly Val Leu Val Gly Val Ala Leu Ile
 690 695 700

<210> 69
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 69

Met Pro Leu Glu Gln Arg Ser Gln His Cys Lys Pro Glu Glu Gly Leu
 1 5 10 15

Glu Ala Arg Gly Glu Ala Leu Gly Leu Val Gly Ala Gln Ala Pro Ala
 20 25 30

Thr Glu Glu Gln Gln Thr Ala Ser Ser Ser Ser Thr Leu Val Glu Val
 35 40 45

Thr Leu Gly Glu Val Pro Ala Ala Asp Ser Pro Ser Pro Pro His Ser
 50 55 60

Pro Gln Gly Ala Ser Ser Phe Ser Thr Thr Ile Asn Tyr Thr Leu Trp
 65 70 75 80

Arg Gln Ser Asp Glu Gly Ser Ser Asn Gln Glu Glu Glu Gly Pro Arg
 85 90 95

Met Phe Pro Asp Leu Glu Ser Glu Phe Gln Ala Ala Ile Ser Arg Lys
 100 105 110

-21-

Met Val Glu Leu Val His Phe Leu Leu Leu Lys Tyr Arg Ala Arg Glu
 115 120 125

Pro Val Thr Lys Ala Glu Met Leu Glu Ser Val Leu Arg Asn Cys Gln
 130 135 140

Asp Phe Phe Pro Val Ile Phe Ser Lys Ala Ser Glu Tyr Leu Gln Leu
 145 150 155 160

Val Phe Gly Ile Glu Val Val Glu Val Val Pro Ile Ser His Leu Tyr
 165 170 175

Ile Leu Val Thr Cys Leu Gly Leu Ser Tyr Asp Gly Leu Leu Gly Asp
 180 185 190

Asn Gln Val Met Pro Lys Thr Gly Leu Leu Ile Ile Val Leu Ala Ile
 195 200 205

Ile Ala Ile Glu Gly Asp Cys Ala Pro Glu Glu Lys Ile Trp Glu Glu
 210 215 220

Leu Ser Met Leu Glu Val Phe Glu Gly Arg Glu Asp Ser Val Phe Ala
 225 230 235 240

His Pro Arg Lys Leu Leu Met Gln Asp Leu Val Gln Glu Asn Tyr Leu
 245 250 255

Glu Tyr Arg Gln Val Pro Gly Ser Asp Pro Ala Cys Tyr Glu Phe Leu
 260 265 270

Trp Gly Pro Arg Ala Leu Ile Glu Thr Ser Tyr Val Lys Val Leu His
 275 280 285

His Thr Leu Lys Ile Gly Gly Glu Pro His Ile Ser Tyr Pro Pro Leu
 290 295 300

His Glu Arg Ala Leu Arg Glu Gly Glu Glu
 305 310

<210> 70
 <211> 609
 <212> PRT
 <213> Homo sapiens

<400> 70

Met Lys Trp Val Thr Phe Ile Ser Leu Leu Phe Leu Phe Ser Ser Ala
 1 5 10 15

-22-

Tyr Ser Arg Gly Val Phe Arg Arg Asp Ala His Lys Ser Glu Val Ala
 20 25 30
 His Arg Phe Lys Asp Leu Gly Glu Glu Asn Phe Lys Ala Leu Val Leu
 35 40 45
 Ile Ala Phe Ala Gln Tyr Leu Gln Gln Cys Pro Phe Glu Asp His Val
 50 55 60
 Lys Leu Val Asn Glu Val Thr Glu Phe Ala Lys Thr Cys Val Ala Asp
 65 70 75 80
 Glu Ser Ala Glu Asn Cys Asp Lys Ser Leu His Thr Leu Phe Gly Asp
 85 90 95
 Lys Leu Cys Thr Val Ala Thr Leu Arg Glu Thr Tyr Gly Glu Met Ala
 100 105 110
 Asp Cys Cys Ala Lys Gln Glu Pro Glu Arg Asn Glu Cys Phe Leu Gln
 115 120 125
 His Lys Asp Asp Asn Pro Asn Leu Pro Arg Leu Val Arg Pro Glu Val
 130 135 140
 Asp Val Met Cys Thr Ala Phe His Asp Asn Glu Glu Thr Phe Leu Lys
 145 150 155 160
 Lys Tyr Leu Tyr Glu Ile Ala Arg Arg His Pro Tyr Phe Tyr Ala Pro
 165 170 175
 Glu Leu Leu Phe Phe Ala Lys Arg Tyr Lys Ala Ala Phe Thr Glu Cys
 180 185 190
 Cys Gln Ala Ala Asp Lys Ala Ala Cys Leu Leu Pro Lys Leu Asp Glu
 195 200 205
 Leu Arg Asp Glu Gly Lys Ala Ser Ser Ala Lys Gln Arg Leu Lys Cys
 210 215 220
 Ala Ser Leu Gln Lys Phe Gly Glu Arg Ala Phe Lys Ala Trp Ala Val
 225 230 235 240
 Ala Arg Leu Ser Gln Arg Phe Pro Lys Ala Glu Phe Ala Glu Val Ser
 245 250 255
 Lys Leu Val Thr Asp Leu Thr Lys Val His Thr Glu Cys Cys His Gly

-23-

260	265	270
Asp Leu Leu Glu Cys Ala Asp 275	Asp Arg Ala Asp 280	Leu Ala Lys Tyr Ile 285
Cys Glu Asn Gln Asp Ser 290	Ile Ser Ser Lys Leu 295	Lys Glu Cys Cys Glu 300
Lys Pro Leu Leu Glu Lys 305	Ser His Cys Ile Ala 310	Glu Val Glu Asn Asp 315 320
Glu Met Pro Ala Asp 325	Leu Pro Ser Leu Ala 330	Ala Asp Phe Val Glu Ser 335
Lys Asp Val Cys Lys Asn Tyr 340	Ala Glu Ala Lys Asp 345	Val Phe Leu Gly 350
Met Phe Leu Tyr Glu Tyr 355	Ala Arg Arg His Pro 360	Asp Tyr Ser Val Val 365
Leu Leu Leu Arg Leu Ala 370	Lys Thr Tyr Glu Thr 375	Thr Leu Glu Lys Cys 380
Cys Ala Ala Ala Asp 385	Pro His Glu Cys Tyr 390	Ala Lys Val Phe Asp Glu 395 400
Phe Lys Pro Leu Val Glu 405	Glu Glu Pro Gln Asn 410	Leu Ile Lys Gln Asn Cys 415
Glu Leu Phe Lys Gln Leu 420	Gly Glu Tyr Lys Phe 425	Gln Asn Ala Leu Leu 430
Val Arg Tyr Thr Lys Lys 435	Val Pro Gln Val Ser 440	Thr Pro Thr Leu Val 445
Glu Val Ser Arg Asn Leu 450	Gly Lys Val Gly Ser 455	Lys Cys Cys Lys His 460
Pro Glu Ala Lys Arg Met 465	Pro Cys Ala Glu Asp 470	Tyr Leu Ser Val Val 475 480
Leu Asn Gln Leu Cys Val 485	Leu His Glu Lys Thr 490	Pro Val Ser Asp Arg 495
Val Thr Lys Cys Cys Thr 500	Glu Ser Leu Val Asn 505	Arg Arg Pro Cys Phe 510

-24-

Ser Ala Leu Glu Val Asp Glu Thr Tyr Val Pro Lys Glu Phe Asn Ala
 515 520 525

Glu Thr Phe Thr Phe His Ala Asp Ile Cys Thr Leu Ser Glu Lys Glu
 530 535 540

Arg Gln Ile Lys Lys Gln Thr Ala Leu Val Glu Leu Val Lys His Lys
 545 550 555 560

Pro Lys Ala Thr Lys Glu Gln Leu Lys Ala Val Met Asp Asp Phe Ala
 565 570 575

Ala Phe Val Glu Lys Cys Cys Lys Ala Asp Asp Lys Glu Thr Cys Phe
 580 585 590

Ala Glu Glu Gly Lys Lys Leu Val Ala Ala Ser Gln Ala Ala Leu Gly
 595 600, 605

Leu

<210> 71
 <211> 212
 <212> PRT
 <213> Hepatitis B virus

<400> 71

Met Gln Leu Phe His Leu Cys Leu Ile Ile Ser Cys Ser Cys Pro Thr
 1 5 10 15

Val Gln Ala Ser Lys Leu Cys Leu Gly Trp Leu Trp Gly Met Asp Ile
 20 25 30

Asp Pro Tyr Lys Glu Phe Gly Ala Thr Val Glu Leu Leu Ser Phe Leu
 35 40 45

Pro Ser Asp Phe Phe Pro Ser Val Arg Asp Leu Leu Asp Thr Ala Ser
 50 55 60

Ala Leu Tyr Arg Glu Ala Leu Glu Ser Pro Glu His Cys Ser Pro His
 65 70 75 80

His Thr Ala Leu Arg Gln Ala Ile Leu Cys Trp Gly Glu Leu Met Thr
 85 90 95

Leu Ala Thr Trp Val Gly Val Asn Leu Glu Asp Pro Ala Ser Arg Asp
 100 105 110

-25-

Leu Val Val Ser Tyr Val Asn Thr Asn Met Gly Leu Lys Phe Arg Gln
 115 120 125

Leu Leu Trp Phe His Ile Ser Cys Leu Thr Phe Gly Arg Glu Thr Val
 130 135 140

Ile Glu Tyr Leu Val Ser Phe Gly Val Trp Ile Arg Thr Pro Pro Ala
 145 150 155 160

Tyr Arg Pro Pro Asn Ala Pro Ile Leu Ser Thr Leu Pro Glu Thr Thr
 165 170 175

Val Val Arg Arg Arg Gly Arg Ser Pro Arg Arg Arg Thr Pro Ser Pro
 180 185 190

Arg Arg Arg Arg Ser Gln Ser Pro Arg Arg Arg Arg Ser Gln Ser Arg
 195 200 205

Glu Ser Gln Cys
 210

<210> 72
 <211> 2768
 <212> PRT
 <213> Homo sapiens

<220>
 <221> misc_feature
 <222> (734)..(734)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (1028)..(1028)
 <223> Xaa can be any naturally occurring amino acid

<220>
 <221> misc_feature
 <222> (2501)..(2501)
 <223> Xaa can be any naturally occurring amino acid

<400> 72

Met Ala Leu Val Leu Glu Ile Phe Thr Leu Leu Ala Ser Ile Cys Trp
 1 5 10 15

Val Ser Ala Asn Ile Phe Glu Tyr Gln Val Asp Ala Gln Pro Leu Arg
 20 25 30

Pro Cys Glu Leu Gln Arg Glu Thr Ala Phe Leu Lys Gln Ala Asp Tyr
 35 40 45

-26-

Val Pro Gln Cys Ala Glu Asp Gly Ser Phe Gln Thr Val Gln Cys Gln
 50 55 60

Asn Asp Gly Arg Ser Cys Trp Cys Val Gly Ala Asn Gly Ser Glu Val
 65 70 75 80

Leu Gly Ser Arg Gln Pro Gly Arg Pro Val Ala Cys Leu Ser Phe Cys
 85 90 95

Gln Leu Gln Lys Gln Gln Ile Leu Leu Ser Gly Tyr Ile Asn Ser Thr
 100 105 110

Asp Thr Ser Tyr Leu Pro Gln Cys Gln Asp Ser Gly Asp Tyr Ala Pro
 115 120 125

Val Gln Cys Asp Val Gln Gln Val Gln Cys Trp Cys Val Asp Ala Glu
 130 135 140

Gly Met Glu Val Tyr Gly Thr Arg Gln Leu Gly Arg Pro Lys Arg Cys
 145 150 155 160

Pro Arg Ser Cys Glu Ile Arg Asn Arg Arg Leu Leu His Gly Val Gly
 165 170 175

Asp Lys Ser Pro Pro Gln Cys Ser Ala Glu Gly Glu Phe Met Pro Val
 180 185 190

Gln Cys Lys Phe Val Asn Thr Thr Asp Met Met Ile Phe Asp Leu Val
 195 200 205

His Ser Tyr Asn Arg Phe Pro Asp Ala Phe Val Thr Phe Ser Ser Phe
 210 215 220

Gln Arg Arg Phe Pro Glu Val Ser Gly Tyr Cys His Cys Ala Asp Ser
 225 230 235 240

Gln Gly Arg Glu Leu Ala Glu Thr Gly Leu Glu Leu Leu Leu Asp Glu
 245 250 255

Ile Tyr Asp Thr Ile Phe Ala Gly Leu Asp Leu Pro Ser Thr Phe Thr
 260 265 270

Glu Thr Thr Leu Tyr Arg Ile Leu Gln Arg Arg Phe Leu Ala Val Gln
 275 280 285

Ser Val Ile Ser Gly Arg Phe Arg Cys Pro Thr Lys Cys Glu Val Glu
 290 295 300

-27-

Arg Phe Thr Ala Thr Ser Phe Gly His Pro Tyr Val Pro Ser Cys Arg
 305 310 315 320

Arg Asn Gly Asp Tyr Gln Ala Val Gln Cys Gln Thr Glu Gly Pro Cys
 325 330 335

Trp Cys Val Asp Ala Gln Gly Lys Glu Met His Gly Thr Arg Gln Gln
 340 345 350

Gly Glu Pro Pro Ser Cys Ala Glu Gly Gln Ser Cys Ala Ser Glu Arg
 355 360 365

Gln Gln Ala Leu Ser Arg Leu Tyr Phe Gly Thr Ser Gly Tyr Phe Ser
 370 375 380

Gln His Asp Leu Phe Ser Ser Pro Glu Lys Arg Trp Ala Ser Pro Arg
 385 390 395 400

Val Ala Arg Phe Ala Thr Ser Cys Pro Pro Thr Ile Lys Glu Leu Phe
 405 410 415

Val Asp Ser Gly Leu Leu Arg Pro Met Val Glu Gly Gln Ser Gln Gln
 420 425 430

Phe Ser Val Ser Glu Asn Leu Leu Lys Glu Ala Ile Arg Ala Ile Phe
 435 440 445

Pro Ser Arg Gly Leu Ala Arg Leu Ala Leu Gln Phe Thr Thr Asn Pro
 450 455 460

Lys Arg Leu Gln Gln Asn Leu Phe Gly Gly Lys Phe Leu Val Asn Val
 465 470 475 480

Gly Gln Phe Asn Leu Ser Gly Ala Leu Gly Thr Arg Gly Thr Phe Asn
 485 490 495

Phe Ser Gln Phe Phe Gln Gln Leu Gly Leu Ala Ser Phe Leu Asn Gly
 500 505 510

Gly Arg Gln Glu Asp Leu Ala Lys Pro Leu Ser Val Gly Leu Asp Ser
 515 520 525

Asn Ser Ser Thr Gly Thr Pro Glu Ala Ala Lys Lys Asp Gly Thr Met
 530 535 540

Asn Lys Pro Thr Val Gly Ser Phe Gly Phe Glu Ile Asn Leu Gln Glu

-28-

545		550		555		560									
Asn	Gln	Asn	Ala	Leu	Lys	Phe	Leu	Ala	Ser	Leu	Leu	Glu	Leu	Pro	Glu
				565					570					575	
Phe	Leu	Leu	Phe	Leu	Gln	His	Ala	Ile	Ser	Val	Pro	Glu	Asp	Val	Ala
			580					585					590		
Arg	Asp	Leu	Gly	Asp	Val	Met	Glu	Thr	Val	Leu	Ser	Ser	Gln	Thr	Cys
		595					600						605		
Glu	Gln	Thr	Pro	Glu	Arg	Leu	Phe	Val	Pro	Ser	Cys	Thr	Thr	Glu	Gly
	610					615					620				
Ser	Tyr	Glu	Asp	Val	Gln	Cys	Phe	Ser	Gly	Glu	Cys	Trp	Cys	Val	Asn
625					630					635					640
Ser	Trp	Gly	Lys	Glu	Leu	Pro	Gly	Ser	Arg	Val	Arg	Gly	Gly	Gln	Pro
			645						650					655	
Arg	Cys	Pro	Thr	Asp	Cys	Glu	Lys	Gln	Arg	Ala	Arg	Met	Gln	Ser	Leu
			660					665					670		
Met	Gly	Ser	Gln	Pro	Ala	Gly	Ser	Thr	Leu	Phe	Val	Pro	Ala	Cys	Thr
		675					680					685			
Ser	Glu	Gly	His	Phe	Leu	Pro	Val	Gln	Cys	Phe	Asn	Ser	Glu	Cys	Tyr
	690					695					700				
Cys	Val	Asp	Ala	Glu	Gly	Gln	Ala	Ile	Pro	Gly	Thr	Arg	Ser	Ala	Ile
705					710					715					720
Gly	Lys	Pro	Lys	Lys	Cys	Pro	Thr	Pro	Cys	Gln	Leu	Gln	Xaa	Glu	Gln
			725						730					735	
Ala	Phe	Leu	Arg	Thr	Val	Gln	Ala	Leu	Leu	Ser	Asn	Ser	Ser	Met	Leu
			740					745					750		
Pro	Thr	Leu	Ser	Asp	Thr	Tyr	Ile	Pro	Gln	Cys	Ser	Thr	Asp	Gly	Gln
		755					760					765			
Trp	Arg	Gln	Val	Gln	Cys	Asn	Gly	Pro	Pro	Glu	Gln	Val	Phe	Glu	Leu
	770					775					780				
Tyr	Gln	Arg	Trp	Glu	Ala	Gln	Asn	Lys	Gly	Gln	Asp	Leu	Thr	Pro	Ala
785					790					795					800

-29-

Lys Leu Leu Val Lys Ile Met Ser Tyr Arg Glu Ala Ala Ser Gly Asn
805 810 815

Phe Ser Leu Phe Ile Gln Ser Leu Tyr Glu Ala Gly Gln Gln Asp Val
820 825 830

Phe Pro Val Leu Ser Gln Tyr Pro Ser Leu Gln Asp Val Pro Leu Ala
835 840 845

Ala Leu Glu Gly Lys Arg Pro Gln Pro Arg Glu Asn Ile Leu Leu Glu
850 855 860

Pro Tyr Leu Phe Trp Gln Ile Leu Asn Gly Gln Leu Ser Gln Tyr Pro
865 870 875 880

Gly Ser Tyr Ser Asp Phe Ser Thr Pro Leu Ala His Phe Asp Leu Arg
885 890 895

Asn Cys Trp Cys Val Asp Glu Ala Gly Gln Glu Leu Glu Gly Met Arg
900 905 910

Ser Glu Pro Ser Lys Leu Pro Thr Cys Pro Gly Ser Cys Glu Glu Ala
915 920 925

Lys Leu Arg Val Leu Gln Phe Ile Arg Glu Thr Glu Glu Ile Val Ser
930 935 940

Ala Ser Asn Ser Ser Arg Phe Pro Leu Gly Glu Ser Phe Leu Val Ala
945 950 955 960

Lys Gly Ile Arg Leu Arg Asn Glu Asp Leu Gly Leu Pro Pro Leu Phe
965 970 975

Pro Pro Arg Glu Ala Phe Ala Glu Gln Phe Leu Arg Gly Ser Asp Tyr
980 985 990

Ala Ile Arg Leu Ala Ala Gln Ser Thr Leu Ser Phe Tyr Gln Arg Arg
995 1000 1005

Arg Phe Ser Pro Asp Asp Ser Ala Gly Ala Ser Ala Leu Leu Arg
1010 1015 1020

Ser Gly Pro Tyr Xaa Pro Gln Cys Asp Ala Phe Gly Ser Trp Glu
1025 1030 1035

Pro Val Gln Cys His Ala Gly Thr Gly His Cys Trp Cys Val Asp
1040 1045 1050

-30-

Glu	Lys	Gly	Gly	Phe	Ile	Pro	Gly	Ser	Leu	Thr	Ala	Arg	Ser	Leu
1055						1060					1065			
Gln	Ile	Pro	Gln	Cys	Pro	Thr	Thr	Cys	Glu	Lys	Ser	Arg	Thr	Ser
1070						1075					1080			
Gly	Leu	Leu	Ser	Ser	Trp	Lys	Gln	Ala	Arg	Ser	Gln	Glu	Asn	Pro
1085						1090					1095			
Ser	Pro	Lys	Asp	Leu	Phe	Val	Pro	Ala	Cys	Leu	Glu	Thr	Gly	Glu
1100						1105					1110			
Tyr	Ala	Arg	Leu	Gln	Ala	Ser	Gly	Ala	Gly	Thr	Trp	Cys	Val	Asp
1115						1120					1125			
Pro	Ala	Ser	Gly	Glu	Glu	Leu	Arg	Pro	Gly	Ser	Ser	Ser	Ser	Ala
1130						1135					1140			
Gln	Cys	Pro	Ser	Leu	Cys	Asn	Val	Leu	Lys	Ser	Gly	Val	Leu	Ser
1145						1150					1155			
Arg	Arg	Val	Ser	Pro	Gly	Tyr	Val	Pro	Ala	Cys	Arg	Ala	Glu	Asp
1160						1165					1170			
Gly	Gly	Phe	Ser	Pro	Val	Gln	Cys	Asp	Gln	Ala	Gln	Gly	Ser	Cys
1175						1180					1185			
Trp	Cys	Val	Met	Asp	Ser	Gly	Glu	Glu	Val	Pro	Gly	Thr	Arg	Val
1190						1195					1200			
Thr	Gly	Gly	Gln	Pro	Ala	Cys	Glu	Ser	Pro	Arg	Cys	Pro	Leu	Pro
1205						1210					1215			
Phe	Asn	Ala	Ser	Glu	Val	Val	Gly	Gly	Thr	Ile	Leu	Cys	Glu	Thr
1220						1225					1230			
Ile	Ser	Gly	Pro	Thr	Gly	Ser	Ala	Met	Gln	Gln	Cys	Gln	Leu	Leu
1235						1240					1245			
Cys	Arg	Gln	Gly	Ser	Trp	Ser	Val	Phe	Pro	Pro	Gly	Pro	Leu	Ile
1250						1255					1260			
Cys	Ser	Leu	Glu	Ser	Gly	Arg	Trp	Glu	Ser	Gln	Leu	Pro	Gln	Pro
1265						1270					1275			
Arg	Ala	Cys	Gln	Arg	Pro	Gln	Leu	Trp	Gln	Thr	Ile	Gln	Thr	Gln

-31-

1280		1285		1290
Gly His Phe Gln Leu Gln Leu Pro Pro Gly Lys Met Cys Ser Ala				
1295		1300		1305
Asp Tyr Ala Gly Leu Leu Gln Thr Phe Gln Val Phe Ile Leu Asp				
1310		1315		1320
Glu Leu Thr Ala Arg Gly Phe Cys Gln Ile Gln Val Lys Thr Phe				
1325		1330		1335
Gly Thr Leu Val Ser Ile Pro Val Cys Asn Asn Ser Ser Val Gln				
1340		1345		1350
Val Gly Cys Leu Thr Arg Glu Arg Leu Gly Val Asn Val Thr Trp				
1355		1360		1365
Lys Ser Arg Leu Glu Asp Ile Pro Val Ala Ser Leu Pro Asp Leu				
1370		1375		1380
His Asp Ile Glu Arg Ala Leu Val Gly Lys Asp Leu Leu Gly Arg				
1385		1390		1395
Phe Thr Asp Leu Ile Gln Ser Gly Ser Phe Gln Leu His Leu Asp				
1400		1405		1410
Ser Lys Thr Phe Pro Ala Glu Thr Ile Arg Phe Leu Gln Gly Asp				
1415		1420		1425
His Phe Gly Thr Ser Pro Arg Thr Trp Phe Gly Cys Ser Glu Gly				
1430		1435		1440
Phe Tyr Gln Val Leu Thr Ser Glu Ala Ser Gln Asp Gly Leu Gly				
1445		1450		1455
Cys Val Lys Cys Pro Glu Gly Ser Tyr Ser Gln Asp Glu Glu Cys				
1460		1465		1470
Ile Pro Cys Pro Val Gly Phe Tyr Gln Glu Gln Ala Gly Ser Leu				
1475		1480		1485
Ala Cys Val Pro Cys Pro Val Gly Arg Thr Thr Ile Ser Ala Gly				
1490		1495		1500
Ala Phe Ser Gln Thr His Cys Val Thr Asp Cys Gln Arg Asn Glu				
1505		1510		1515

-32-

Ala Gly	Leu Gln Cys Asp	Gln	Asn Gly Gln Tyr	Arg	Ala Ser Gln
1520		1525		1530	
Lys Asp	Arg Gly Ser Gly	Lys	Ala Phe Cys Val	Asp	Gly Glu Gly
1535		1540		1545	
Arg Arg	Leu Pro Trp Trp	Glu	Thr Glu Ala Pro	Leu	Glu Asp Ser
1550		1555		1560	
Gln Cys	Leu Met Met Gln	Lys	Phe Glu Lys Val	Pro	Glu Ser Lys
1565		1570		1575	
Val Ile	Phe Asp Ala Asn	Ala	Pro Val Ala Val	Arg	Ser Lys Val
1580		1585		1590	
Pro Asp	Ser Glu Phe Pro	Val	Met Gln Cys Leu	Thr	Asp Cys Thr
1595		1600		1605	
Glu Asp	Glu Ala Cys Ser	Phe	Phe Thr Val Ser	Thr	Thr Glu Pro
1610		1615		1620	
Glu Ile	Ser Cys Asp Phe	Tyr	Ala Trp Thr Ser	Asp	Asn Val Ala
1625		1630		1635	
Cys Met	Thr Ser Asp Gln	Lys	Arg Asp Ala Leu	Gly	Asn Ser Lys
1640		1645		1650	
Ala Thr	Ser Phe Gly Ser	Leu	Arg Cys Gln Val	Lys	Val Arg Ser
1655		1660		1665	
His Gly	Gln Asp Ser Pro	Ala	Val Tyr Leu Lys	Lys	Gly Gln Gly
1670		1675		1680	
Ser Thr	Thr Thr Leu Gln	Lys	Arg Phe Glu Pro	Thr	Gly Phe Gln
1685		1690		1695	
Asn Met	Leu Ser Gly Leu	Tyr	Asn Pro Ile Val	Phe	Ser Ala Ser
1700		1705		1710	
Gly Ala	Asn Leu Thr Asp	Ala	His Leu Phe Cys	Leu	Leu Ala Cys
1715		1720		1725	
Asp Arg	Asp Leu Cys Cys	Asp	Gly Phe Val Leu	Thr	Gln Val Gln
1730		1735		1740	
Gly Gly	Ala Ile Ile Cys	Gly	Leu Leu Ser Ser	Pro	Ser Val Leu
1745		1750		1755	

-33-

Leu	Cys	Asn	Val	Lys	Asp	Trp	Met	Asp	Pro	Ser	Glu	Ala	Trp	Ala
1760						1765					1770			
Asn	Ala	Thr	Cys	Pro	Gly	Val	Thr	Tyr	Asp	Gln	Glu	Ser	His	Gln
1775						1780					1785			
Val	Ile	Leu	Arg	Leu	Gly	Asp	Gln	Glu	Phe	Ile	Lys	Ser	Leu	Thr
1790						1795					1800			
Pro	Leu	Glu	Gly	Thr	Gln	Asp	Thr	Phe	Thr	Asn	Phe	Gln	Gln	Val
1805						1810					1815			
Tyr	Leu	Trp	Lys	Asp	Ser	Asp	Met	Gly	Ser	Arg	Pro	Glu	Ser	Met
1820						1825					1830			
Gly	Cys	Arg	Lys	Asx	Thr	Val	Pro	Arg	Pro	Ala	Ser	Pro	Thr	Glu
1835						1840					1845			
Ala	Gly	Leu	Thr	Thr	Glu	Leu	Phe	Ser	Pro	Val	Asp	Leu	Asn	Gln
1850						1855					1860			
Val	Ile	Val	Asn	Gly	Asn	Gln	Ser	Leu	Ser	Ser	Gln	Lys	His	Trp
1865						1870					1875			
Leu	Phe	Lys	His	Leu	Phe	Ser	Ala	Gln	Gln	Ala	Asn	Leu	Trp	Cys
1880						1885					1890			
Leu	Ser	Arg	Cys	Val	Gln	Glu	His	Ser	Phe	Cys	Gln	Leu	Ala	Glu
1895						1900					1905			
Ile	Thr	Glu	Ser	Ala	Ser	Leu	Tyr	Phe	Thr	Cys	Thr	Leu	Tyr	Pro
1910						1915					1920			
Glu	Ala	Gln	Val	Cys	Asp	Asp	Ile	Met	Glu	Ser	Asn	Ala	Gln	Gly
1925						1930					1935			
Cys	Arg	Leu	Ile	Leu	Pro	Gln	Met	Pro	Lys	Ala	Leu	Phe	Arg	Lys
1940						1945					1950			
Lys	Val	Ile	Leu	Glu	Asp	Lys	Val	Lys	Asn	Phe	Tyr	Thr	Arg	Leu
1955						1960					1965			
Pro	Phe	Gln	Lys	Leu	Met	Gly	Ile	Ser	Ile	Arg	Asn	Lys	Val	Pro
1970						1975					1980			
Met	Ser	Glu	Lys	Ser	Ile	Ser	Asn	Gly	Phe	Phe	Glu	Cys	Glu	Arg

-34-

1985	1990	1995
Arg Cys Asp Ala Asp Pro Cys Cys Thr Gly Phe Gly Phe Leu Asn 2000 2005 2010		
Val Ser Gln Leu Lys Gly Gly Glu Val Thr Cys Leu Thr Leu Asn 2015 2020 2025		
Ser Leu Gly Ile Gln Met Cys Ser Glu Glu Asn Gly Gly Ala Trp 2030 2035 2040		
Arg Ile Leu Asp Cys Gly Ser Pro Asp Ile Glu Val His Thr Tyr 2045 2050 2055		
Pro Phe Gly Trp Tyr Gln Lys Pro Ile Ala Gln Asn Asn Ala Pro 2060 2065 2070		
Ser Phe Cys Pro Leu Val Val Leu Pro Ser Leu Thr Glu Lys Val 2075 2080 2085		
Ser Leu Asp Ser Trp Gln Ser Leu Ala Leu Ser Ser Val Val Val 2090 2095 2100		
Asp Pro Ser Ile Arg His Phe Asp Val Ala His Val Ser Thr Ala 2105 2110 2115		
Ala Thr Ser Asn Phe Ser Ala Val Arg Asp Leu Cys Leu Ser Glu 2120 2125 2130		
Cys Ser Gln His Glu Ala Cys Leu Ile Thr Thr Leu Gln Thr Gln 2135 2140 2145		
Pro Gly Ala Val Arg Cys Met Phe Tyr Ala Asp Thr Gln Ser Cys 2150 2155 2160		
Thr His Ser Leu Gln Gly Gln Asn Cys Arg Leu Leu Leu Arg Glu 2165 2170 2175		
Glu Ala Thr His Ile Tyr Arg Lys Pro Gly Ile Ser Leu Leu Ser 2180 2185 2190		
Tyr Glu Ala Ser Val Pro Ser Val Pro Ile Ser Thr His Gly Arg 2195 2200 2205		
Leu Leu Gly Arg Ser Gln Ala Ile Gln Val Gly Thr Ser Trp Lys 2210 2215 2220		

-35-

Gln	Val	Asp	Gln	Phe	Leu	Gly	Val	Pro	Tyr	Ala	Ala	Pro	Pro	Leu
2225						2230					2235			
Ala	Glu	Arg	Arg	Phe	Gln	Ala	Pro	Glu	Pro	Leu	Asn	Trp	Thr	Gly
2240						2245					2250			
Ser	Trp	Asp	Ala	Ser	Lys	Pro	Arg	Ala	Ser	Cys	Trp	Gln	Pro	Gly
2255						2260					2265			
Thr	Arg	Thr	Ser	Thr	Ser	Pro	Gly	Val	Ser	Glu	Asp	Cys	Leu	Tyr
2270						2275					2280			
Leu	Asn	Val	Phe	Ile	Pro	Gln	Asn	Val	Ala	Pro	Asn	Ala	Ser	Val
2285						2290					2295			
Leu	Val	Phe	Phe	His	Asn	Thr	Met	Asp	Arg	Glu	Glu	Ser	Glu	Gly
2300						2305					2310			
Trp	Pro	Ala	Ile	Asp	Gly	Ser	Phe	Leu	Ala	Ala	Val	Gly	Asn	Leu
2315						2320					2325			
Ile	Val	Val	Thr	Ala	Ser	Tyr	Arg	Val	Gly	Val	Phe	Gly	Phe	Leu
2330						2335					2340			
Ser	Ser	Gly	Ser	Gly	Glu	Val	Ser	Gly	Asn	Trp	Gly	Leu	Leu	Asp
2345						2350					2355			
Gln	Val	Ala	Ala	Leu	Thr	Trp	Val	Gln	Thr	His	Ile	Arg	Gly	Phe
2360						2365					2370			
Gly	Gly	Asp	Pro	Arg	Arg	Val	Ser	Leu	Ala	Ala	Asp	Arg	Gly	Gly
2375						2380					2385			
Ala	Asp	Val	Ala	Ser	Ile	His	Leu	Leu	Thr	Ala	Arg	Ala	Thr	Asn
2390						2395					2400			
Ser	Gln	Leu	Phe	Arg	Arg	Ala	Val	Leu	Met	Gly	Gly	Ser	Ala	Leu
2405						2410					2415			
Ser	Pro	Ala	Ala	Val	Ile	Ser	His	Glu	Arg	Ala	Gln	Gln	Gln	Ala
2420						2425					2430			
Ile	Ala	Leu	Ala	Lys	Glu	Val	Ser	Cys	Pro	Met	Ser	Ser	Ser	Gln
2435						2440					2445			
Glu	Val	Val	Ser	Cys	Leu	Arg	Gln	Lys	Pro	Ala	Asn	Val	Leu	Asn
2450						2455					2460			

-36-

Asp	Ala	Gln	Thr	Lys	Leu	Leu	Ala	Val	Ser	Gly	Pro	Phe	His	Tyr
2465						2470					2475			
Trp	Gly	Pro	Val	Ile	Asp	Gly	His	Phe	Leu	Arg	Glu	Pro	Pro	Ala
2480						2485					2490			
Arg	Ala	Leu	Lys	Arg	Ser	Leu	Xaa	Val	Glu	Val	Asp	Leu	Leu	Ile
2495						2500					2505			
Gly	Ser	Ser	Gln	Asp	Asp	Gly	Leu	Ile	Asn	Arg	Ala	Lys	Ala	Val
2510						2515					2520			
Lys	Gln	Phe	Glu	Glu	Ser	Gln	Gly	Arg	Thr	Ser	Ser	Lys	Thr	Ala
2525						2530					2535			
Phe	Tyr	Gln	Ala	Leu	Gln	Asn	Ser	Leu	Gly	Gly	Glu	Asp	Ser	Asp
2540						2545					2550			
Ala	Arg	Val	Glu	Ala	Ala	Ala	Thr	Trp	Tyr	Tyr	Ser	Leu	Glu	His
2555						2560					2565			
Ser	Thr	Asp	Asp	Tyr	Ala	Ser	Phe	Ser	Arg	Ala	Leu	Glu	Asn	Ala
2570						2575					2580			
Thr	Arg	Asp	Tyr	Phe	Ile	Ile	Cys	Pro	Ile	Ile	Asp	Met	Ala	Ser
2585						2590					2595			
Ala	Trp	Ala	Lys	Arg	Ala	Arg	Gly	Asn	Val	Phe	Met	Tyr	His	Ala
2600						2605					2610			
Pro	Glu	Asn	Tyr	Gly	His	Gly	Ser	Leu	Glu	Leu	Leu	Ala	Asp	Val
2615						2620					2625			
Gln	Phe	Ala	Leu	Gly	Leu	Pro	Phe	Tyr	Pro	Ala	Tyr	Glu	Gly	Gln
2630						2635					2640			
Phe	Ser	Leu	Glu	Glu	Lys	Ser	Leu	Ser	Leu	Lys	Ile	Met	Gln	Tyr
2645						2650					2655			
Phe	Ser	His	Phe	Ile	Arg	Ser	Gly	Asn	Pro	Asn	Tyr	Pro	Tyr	Glu
2660						2665					2670			
Phe	Ser	Arg	Lys	Val	Pro	Thr	Phe	Ala	Thr	Pro	Trp	Pro	Asp	Phe
2675						2680					2685			
Val	Pro	Arg	Ala	Gly	Gly	Glu	Asn	Tyr	Lys	Glu	Phe	Ser	Glu	Leu

-37-

2690 2695 2700
 Leu Pro Asn Arg Gln Gly Leu Lys Lys Ala Asp Cys Ser Phe Trp
 2705 2710 2715
 Ser Lys Tyr Ile Ser Ser Leu Lys Thr Ser Ala Asp Gly Ala Lys
 2720 2725 2730
 Gly Gly Gln Ser Ala Glu Ser Glu Glu Glu Glu Leu Thr Ala Gly
 2735 2740 2745
 Ser Gly Leu Arg Glu Asp Leu Leu Ser Leu Gln Glu Pro Gly Ser
 2750 2755 2760
 Lys Thr Tyr Ser Lys
 2765

<210> 73
 <211> 10
 <212> PRT
 <213> Artificial Sequence
 <220>
 <223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 73

Thr Ile Ser Pro Leu Asn Thr Ser Tyr Lys
 1 5 10

<210> 74
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 74

Arg Thr Leu Thr Leu Leu Ser Val Thr Arg
 1 5 10

<210> 75
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

-38-

<400> 75

Ile Val Pro Ser Tyr Thr Tyr Arg
1 5

<210> 76

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 76

Arg Thr Leu Thr Leu Phe Asn Val Thr Arg
1 5 10

<210> 77

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 77

His Thr Gln Val Leu Phe Ile Ala Lys
1 5

<210> 78

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 78

Phe Val Ser Asn Leu Ala Thr Gly Arg
1 5

<210> 79

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 79

Ser Ser Phe Thr Thr Ile Asn Lys

-39-

1

5

<210> 80
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 80

Thr Thr Ile Asn Tyr Thr Leu Trp Arg
1 5

<210> 81
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 81

Ser Met Leu Glu Val Phe Glu Gly Lys
1 5

<210> 82
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 82

Ser Val Phe Ala His Pro Arg Lys
1 5

<210> 83
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 83

Ile Val Tyr Pro Pro Leu His Glu Arg
1 5

<210> 84
<211> 9
<212> PRT

-40-

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 84

Tyr Val Phe Pro Val Ile Phe Ser Lys
1 5

<210> 85

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 85

Ser Val Leu Glu Val Phe Glu Gly Lys
1 5

<210> 86

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 86

Leu Val His Phe Leu Leu Leu Lys Lys
1 5

<210> 87

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 87

Val Val Phe Gly Ile Leu Ile Lys Arg
1 5

<210> 88

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 88

-41-

Lys Ile Arg Lys Tyr Thr Met Arg Arg
1 5

<210> 89
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 89

Val Leu Arg Glu Asn Thr Ser Pro Lys
1 5

<210> 90
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 90

Leu Val Lys Ser Pro Asn His Val Lys
1 5

<210> 91
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 91

Lys Val Thr Asp Phe Gly Leu Ala Arg
1 5

<210> 92
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 92

Met Ala Leu Glu Ser Ile Leu Arg Arg
1 5

<210> 93
<211> 10

-42-

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2/neu
<400> 93

Leu Val Ser Glu Phe Ser Arg Met Ala Arg
1 5 10

<210> 94
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2/neu
<400> 94

Ala Ser Pro Leu Asp Ser Thr Phe Tyr Arg
1 5 10

<210> 95
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53
<400> 95

Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Lys
1 5 10

<210> 96
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53
<400> 96

Cys Thr Tyr Ser Pro Ala Leu Asn Lys
1 5

<210> 97
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

-43-

<400> 97

Gly Thr Arg Val Arg Ala Met Ala Ile Tyr Lys
1 5 10

<210> 98

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens p53

<400> 98

Arg Val Arg Ala Met Ala Ile Tyr Arg
1 5

<210> 99

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens p53

<400> 99

Arg Val Cys Ala Cys Pro Gly Arg
1 5

<210> 100

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 100

Ile Tyr Pro Asn Ala Ser Leu Leu Ile
1 5

<210> 101

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 101

Leu Tyr Gly Pro Asp Ala Pro Thr Ile
1 5

-44-

<210> 102
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 102

Gln Tyr Ser Trp Phe Val Asn Gly Thr Phe
1 5 10

<210> 103
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 103

Val Tyr Ala Glu Pro Pro Lys Pro Phe
1 5

<210> 104
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 104

Thr Tyr Leu Trp Trp Val Asn Asn Gln Ser Leu
1 5 10

<210> 105
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 105

Tyr Tyr Arg Pro Gly Val Asn Leu Ser Phe
1 5 10

<210> 106

-45-

<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 106

Gln Tyr Ser Trp Leu Ile Asp Gly Asn Phe
1 5 10

<210> 107
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 107

Thr Tyr Leu Trp Trp Val Asn Gly Gln Ser Leu
1 5 10

<210> 108
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 108

Leu Tyr Gly Pro Asp Thr Pro Ile Ile
1 5

<210> 109
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 109

Ser Tyr Leu Ser Gly Ala Asn Leu Asn Phe
1 5 10

<210> 110
<211> 9
<212> PRT

-46-

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 110

Thr Tyr Ala Cys Phe Val Ser Asn Leu
1 5

<210> 111

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 111

Met Tyr Pro Asp Leu Glu Ser Glu Phe
1 5

<210> 112

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 112

Leu Tyr Ile Leu Val Thr Cys Leu Gly Phe
1 5 10

<210> 113

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 113

Val Met Pro Lys Thr Gly Leu Leu Ile
1 5

<210> 114

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

-47-

<400> 114

Leu Trp Gly Pro Arg Ala Leu Ile
1 5

<210> 115

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 115

Ser Tyr Val Lys Val Leu His His Thr Phe
1 5 10

<210> 116

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 116

Asn Trp Gln Tyr Phe Phe Pro Val Ile
1 5

<210> 117

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 117

Leu Tyr Ile Phe Ala Thr Cys Leu Gly Phe
1 5 10

<210> 118

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 118

Ile Met Pro Lys Ala Gly Leu Leu Ile
1 5

-48-

<210> 119
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 119

Ser Tyr Pro Pro Leu His Glu Trp Val Leu
1 5 10

<210> 120
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 120

Pro Tyr Val Ser Arg Leu Leu Gly Phe
1 5

<210> 121
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 121

Ser Tyr Gly Val Thr Val Trp Glu Phe
1 5

<210> 122
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 122

Val Tyr Met Ile Met Val Lys Cys Trp Met Ile
1 5 10

<210> 123
<211> 9
<212> PRT
<213> Artificial Sequence

<220>

-49-

<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 123

Arg Tyr Arg Glu Leu Val Ser Glu Phe
1 5

<210> 124

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens p53

<400> 124

Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Leu
1 5 10

<210> 125

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens p53

<400> 125

Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Phe
1 5 10

<210> 126

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens p53

<400> 126

Thr Tyr Ser Pro Ala Leu Asn Lys Met Phe
1 5 10

<210> 127

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 127

Arg Ser Asp Ser Val Ile Leu Asn Val Leu Tyr

-50-

1

5

10

<210> 128

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 128

Ile Thr Asp Asn Asn Ser Gly Ser Tyr

1

5

<210> 129

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 129

His Ser Asp Pro Val Ile Leu Asn Val Leu Tyr

1

5

10

<210> 130

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 130

Pro Thr Asp Ser Pro Ser Tyr Thr Tyr Tyr

1

5

10

<210> 131

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 131

Ala Ala Asp Asn Pro Pro Ala Gln Tyr

1

5

-51-

<210> 132
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 132

Ile Thr Asp Lys Asn Ser Gly Leu Tyr
1 5

<210> 133
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 133

Arg Ser Asp Pro Val Thr Leu Asp Val Leu Tyr
1 5 10

<210> 134
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 134

His Ser Ala Ser Asn Pro Ser Pro Gln Tyr
1 5 10

<210> 135
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 135

Val Met Asp Gly Val Gly Ser Pro Tyr
1 5

<210> 136
<211> 10
<212> PRT

-52-

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 136

Cys	Thr	Gln	Ile	Ala	Lys	Gly	Met	Ser	Tyr
1				5					10

<210> 137

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 137

Leu	Leu	Asp	Ile	Asp	Glu	Thr	Glu	Tyr
1				5				

<210> 138

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 138

Phe	Thr	His	Gln	Ser	Asp	Val	Trp	Ser	Tyr
1				5					10

<210> 139

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 139

Pro	Ala	Asp	Pro	Leu	Asp	Ser	Thr	Phe	Tyr
1				5					10

<210> 140

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 140

-53-

Met Thr Asp Leu Val Asp Ala Glu Glu Tyr
1 5 10

<210> 141
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 141

Leu Thr Asp Ser Pro Gln Pro Glu Tyr
1 5

<210> 142
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 142

Phe Ser Pro Ala Phe Asp Asn Leu Tyr Tyr
1 5 10

<210> 143
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2/neu

<400> 143

Gly Thr Asp Thr Ala Glu Asn Pro Glu Tyr
1 5 10

<210> 144
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 144

Ala Ser Asp Phe Ser Thr Thr Ile Asn Tyr
1 5 10

<210> 145
<211> 8

-54-

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 145

Val Thr Asp Leu Gly Leu Ser Tyr
1 5

<210> 146
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 146

Met Gln Asp Leu Val Gln Glu Asn Tyr
1 5

<210> 147
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 147

Ala Ser Ser Leu Pro Thr Thr Met Asn Tyr
1 5 10

<210> 148
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 148

Gly Thr Val Val Gly Asn Trp Gln Tyr
1 5

<210> 149
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

-55-

<400> 149

Glu Val Asp Pro Ile Gly His Leu Tyr
1 5

<210> 150

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 150

Leu Thr Asp His Phe Val Gln Glu Asn Tyr
1 5 10

<210> 151

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 151

Ile Thr Gly Gly Pro His Ile Ser Tyr
1 5

<210> 152

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens p53

<400> 152

Pro Thr Gln Lys Thr Tyr Gln Gly Ser Tyr
1 5 10

<210> 153

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens p53

<400> 153

Gly Thr Asp Lys Ser Val Thr Cys Thr Tyr
1 5 10

-56-

<210> 154
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic peptide derived from Homo sapiens p53
 <400> 154

Arg Val Asp Gly Asn Leu Arg Val Glu Tyr
 1 5 10

<210> 155
 <211> 11
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic peptide derived from Homo sapiens p53
 <400> 155

Gly Ser Asp Cys Thr Thr Ile His Tyr Asn Tyr
 1 5 10

<210> 156
 <211> 325
 <212> PRT
 <213> Unknown

<220>
 <223> Polypeptide 1

<400> 156

Met Gly Met Gln Val Gln Ile Gln Ser Leu Phe Leu Leu Leu Trp
 1 5 10 15

Val Pro Gly Ser Arg Gly Val Pro Ile Ser His Leu Asp Ile Leu Lys
 20 25 30

Lys Leu Ser Glu Tyr Leu Gln Leu Val Gly Ala Ala Ala Ile Ser Pro
 35 40 45

Ser Tyr Thr Tyr Tyr Arg Lys Ala Ala Ala Thr Tyr Ala Cys Phe Val
 50 55 60

Ser Asn Leu Lys Val Thr Asp Phe Gly Leu Ala Arg Gly Ala Ala Ala
 65 70 75 80

His Leu Phe Gly Tyr Ser Ile Tyr Lys Asn Ala Gln Tyr Ser Trp Phe
 85 90 95

-57-

Val Asn Gly Thr Phe Lys Ala Ala Lys Val Phe Gly Ser Leu Ala
 100 105 110

Phe Val Asn Ala Ala Ala Pro Tyr Val Ser Arg Leu Leu Gly Ile Asn
 115 120 125

Ile Met Ile Gly His Leu Val Gly Val Asn Leu Leu Thr Phe Trp Asn
 130 135 140

Pro Pro Val Ile Val Tyr Pro Pro Leu His Glu Arg Asn Ala Ala Ala
 145 150 155 160

Glu Tyr Leu Gln Leu Met Phe Gly Ile Asn Ala Ile Met Pro Lys Ala
 165 170 175

Gly Leu Leu Ile Asn Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Lys Lys
 180 185 190

Ala Ala Ala Arg Val Arg Ala Met Ala Ile Tyr Arg Asn Ala Ala Ala
 195 200 205

Arg Tyr Ala Arg Asp Pro Gln Arg Phe Gly Ala Ala Ala Lys Leu Cys
 210 215 220

Pro Val Gln Leu Trp Val Asn Ala Ser Met Pro Pro Pro Gly Thr Arg
 225 230 235 240

Val Gly Ala Ala Ala Val Val Leu Gly Val Val Phe Gly Ile Ala Lys
 245 250 255

Phe Val Ala Ala Trp Thr Leu Lys Ala Ala Ala Lys Val Ala Glu Ile
 260 265 270

Val His Phe Leu Asn Thr Tyr Ser Pro Ala Leu Asn Lys Met Phe Lys
 275 280 285

Ala Ala Ser Tyr Gly Phe Arg Leu Gly Phe Phe Lys Ala Ala Ala Ser
 290 295 300

Ser Phe Ser Thr Thr Ile Asn Lys Lys Ala Ala Ala Val Val Phe Gly
 305 310 315 320

Ile Leu Ile Lys Arg
 325

<210> 157

<211> 326

-58-

<212> PRT
 <213> Unknown

<220>
 <223> Polypeptide 2

<400> 157

Met Gly Met Gln Val Gln Ile Gln Ser Leu Phe Leu Leu Leu Leu Trp
 1 5 10 15

Val Pro Gly Ser Arg Gly Ile Val Tyr Pro Pro Leu His Glu Arg Asn
 20 25 30

Ala Ala Ala Glu Tyr Leu Gln Leu Leu Phe Gly Ile Asn Ala Ile Met
 35 40 45

Pro Lys Ala Gly Leu Leu Ile Asn Lys Thr Tyr Gln Gly Ser Tyr Gly
 50 55 60

Phe Lys Lys Ala Ala Ala Arg Val Arg Ala Met Ala Ile Tyr Arg Asn
 65 70 75 80

Ala Ala Ala Arg Tyr Ala Arg Asp Pro Gln Arg Phe Gly Ala Ala Ala
 85 90 95

Lys Leu Cys Pro Val Gln Leu Trp Val Asn Ala Ser Met Pro Pro Pro
 100 105 110

Gly Thr Arg Val Gly Ala Ala Ala Val Val Leu Gly Val Val Phe Gly
 115 120 125

Ile Ala Lys Phe Val Ala Ala Trp Thr Leu Lys Ala Ala Ala Lys Val
 130 135 140

Ala Glu Leu Val Trp Phe Leu Asn Ala Ala Ala Thr Tyr Ser Pro Ala
 145 150 155 160

Leu Asn Lys Met Phe Lys Ala Ala Ser Tyr Gly Phe Arg Leu Gly Phe
 165 170 175

Phe Lys Ala Ala Ala Ser Ser Phe Ser Thr Thr Ile Asn Lys Lys Ala
 180 185 190

Ala Ala Val Val Phe Gly Ile Leu Ile Lys Arg Val Pro Ile Ser His
 195 200 205

Leu Gly Ile Leu Lys Lys Leu Ser Glu Tyr Leu Gln Leu Val Gly Ala
 210 215 220

-59-

Ala Ala Ile Ser Pro Ser Tyr Thr Tyr Tyr Arg Lys Ala Ala Ala Thr
 225 230 235 240

Tyr Ala Cys Phe Val Ser Asn Leu Lys Val Phe Gly Ser Leu Ala Phe
 245 250 255

Val Asn Ala Ala Ala Pro Tyr Val Ser Arg Leu Leu Gly Ile Asn Ala
 260 265 270

His Leu Phe Gly Tyr Ser Asp Tyr Lys Asn Ala Gln Tyr Ser Trp Phe
 275 280 285

Val Asn Gly Thr Phe Lys Ala Ala Ala Lys Val Thr Asp Phe Gly Leu
 290 295 300

Ala Arg Asn Ile Met Met Gly His Leu Val Gly Val Asn Leu Leu Thr
 305 310 315 320

Phe Trp Asn Pro Pro Val
 325

<210> 158
 <211> 331
 <212> PRT
 <213> Unknown

<220>
 <223> Polypeptide 3

<400> 158

Met Gly Met Gln Val Gln Ile Gln Ser Leu Phe Leu Leu Leu Leu Trp
 1 5 10 15

Val Pro Gly Ser Arg Gly Thr Tyr Ser Pro Ala Leu Asn Lys Met Phe
 20 25 30

Lys Ala Ala Ser Tyr Gly Phe Arg Leu Gly Phe Phe Lys Ala Ala Ala
 35 40 45

Ser Ser Phe Ser Thr Thr Ile Asn Lys Lys Ala Ala Ala Val Val Phe
 50 55 60

Gly Ile Leu Ile Lys Arg Asn Ala Ala Ala Ala Lys Phe Val Ala Ala
 65 70 75 80

Trp Thr Leu Lys Ala Ala Ala Lys Val Ala Glu Ile Val His Phe Leu
 85 90 95

-60-

Lys Val Thr Asp Phe Gly Leu Ala Arg Gly Ala Ala Ala His Leu Phe
 100 105 110

Pro Tyr Ser Trp Tyr Lys Asn Ala Thr Tyr Ala Cys Phe Val Ser Asn
 115 120 125

Leu Lys Ala Ala Ala Val Pro Ile Ser His Leu Glu Ile Leu Lys Lys
 130 135 140

Leu Ser Glu Tyr Leu Gln Leu Val Gly Ala Ala Ala Ile Ser Pro Ser
 145 150 155 160

Tyr Thr Tyr Tyr Arg Lys Ala Ala Ala Gln Tyr Ser Trp Phe Val Asn
 165 170 175

Gly Thr Phe Lys Ala Ala Ala Lys Val Phe Gly Ser Leu Ala Phe Val
 180 185 190

Asn Ala Ala Ala Pro Tyr Val Ser Arg Leu Leu Gly Ile Asn Ile Met
 195 200 205

Ile Gly His Leu Val Gly Val Asn Leu Leu Thr Phe Trp Asn Pro Pro
 210 215 220

Val Ile Val Tyr Pro Pro Leu His Glu Arg Asn Ala Ala Ala Glu Tyr
 225 230 235 240

Leu Gln Leu Met Phe Gly Ile Asn Ser Met Pro Pro Pro Gly Thr Arg
 245 250 255

Val Gly Ala Ala Ala Val Val Leu Gly Val Val Phe Gly Ile Asn Ala
 260 265 270

Ile Met Pro Lys Ala Gly Leu Leu Ile Asn Lys Thr Tyr Gln Gly Ser
 275 280 285

Tyr Gly Phe Lys Lys Ala Ala Ala Arg Val Arg Ala Met Ala Ile Tyr
 290 295 300

Arg Asn Ala Ala Ala Arg Tyr Ala Arg Asp Pro Gln Arg Phe Gly Ala
 305 310 315 320

Ala Ala Lys Leu Cys Pro Val Gln Leu Trp Val
 325 330

<210> 159

<211> 978

-61-

<212> DNA
 <213> Unknown

<220>
 <223> Polynucleotide 1

<400> 159
 atgggaatgc aggtgcaa at acagtctctc ttctctgggt tccaggatca 60
 cggggcgctcc ccatttccca tctcgatatt ctgaagaagc tgagcgagta cctgcaactg 120
 gtcggcgctg cagctattag ccctagctac acttattatc ggaaggctgc tgctacctat 180
 gcctgtttcg tgtctaactc caaagtcaca gacttcgggc tcgcaagagg ggctgccgct 240
 cacctgttcg ggtactctat ctataaaaac gcccaatatt cctggtttgt gaatggaacc 300
 ttcaaagctg cagccaaggt cttcggcagc ctggcatttg tcaacgccgc tgctccctac 360
 gtgagccggc tcctcgggat taatattatg atcggccacc tgggtgggagt gaatctgctc 420
 acattttgga accctccagt gatcgtgtac ccacctctcc atgaaaggaa cgccgcagcc 480
 gaatatctgc agctgatgtt cggcatcaat gccattatgc cttaaagccgg actgctgac 540
 aacaagactt accagggctc ttacggcttc aagaaggctg cagcccgcgt cagagccatg 600
 gctatctacc gcaacgccgc cgctcggtag gccagggacc ccagcgctt tggggctgcc 660
 gccaaactgt gcccagtgc gctgtgggtg aacgcttcta tgccccctcc aggcacaaga 720
 gtgggagccg ctgctgtcgt gctgggagtc gtgttcggca tcgcaaagtt tgtggccgcc 780
 tggaccctca aggcagcagc aaaagtcgca gagattgtgc actttctgaa cacttactcc 840
 cccgcactga acaaaatggt taaagccgca tcctatggct tcaggctggg gttctttaag 900
 gccgccgcaa gctccttctc taccacaatc aataagaagg ccgctgccgt ggtgttcgga 960
 atcctcatca aaagatag 978

<210> 160
 <211> 981
 <212> DNA
 <213> Unknown

<220>
 <223> Polynucleotide 2

<400> 160
 atgggaatgc aggtgcaa at acagtctctc ttctctgggt tccaggatca 60
 cggggcattg tgtaccccc cctgcacgag cggaaacgctg ctgcagaata tctccagctc 120
 ctgttcggca ttaacgccat tatgcctaaa gcaggcctgc tcatcaacaa aacttaccag 180
 ggaagctatg ggttcaagaa ggcagctgca agagtcaggg ccatggccat ctatcggaat 240
 gctgcagcac gctatgccag ggatcctcaa aggtttgggg ccgccgcaa gctctgtccc 300
 gtgcaactct ggggtcaatgc ctccatgcct ccacccggaa caagagtcgg agccgccgcc 360

-62-

gtggtcctcg ggggtggtctt cgggatcgcc aaattcgtcg ccgcctggac actgaaggcc 420
 gctgctaagg tcgccgaact ggtgtggttc ctgaacgctg ccgcaacata ctcccctgct 480
 ctcaacaaaa tgtttaaggc tgccctcttac ggcttttagac tgggattttt caaggcagct 540
 gcctctagct tctctacaac tatcaataaa aaggccgcag ccgtcgtggt cgggatcctg 600
 atcaaacggg tgccaatcag ccatctcggc atcctgaaga aactgtctga gtacctgcag 660
 ctgggtggggg ctgccgctat ctctccaagc tacacctact atagaaaggc agctgctacc 720
 tacgcttgct tcgtgagcaa tctgaaagtg tttggctccc tggcattcgt caacgcagct 780
 gcccatacg tgtcccgct cctgggaatt aacgctcacc tgtttggata tagcgactat 840
 aagaatgccc agtactcctg gttcgtgaac ggcaccttca aggcagccgc aaagggtgacc 900
 gactttggcc tggctcgcaa cattatgatg ggccatctgg tgggcgtgaa tctcctgact 960
 ttttggaatc cccctgtgta g 981

<210> 161
 <211> 996
 <212> DNA
 <213> Unknown

<220>
 <223> Polynucleotide 3

<400> 161
 atgggaatgc aggtgcaa at acagtctctc ttcccttttgc ttctctgggt tccaggatca 60
 cggggcacct actctcctgc actcaataaa atgtttaagg ccgcataccta cggcttcagg 120
 ctccgattct ttaaggccgc cgcaagcagc ttttctacta caatcaacaa gaaagctgcc 180
 gcagtgggtct ttgggatcct catcaaaagg aacgcagccg cagctaagtt cgtcgtgct 240
 tggaccctga aagccgccgc caaagtcgct gaaatcgctc atttcctcaa ggtgacagat 300
 tttggactgg ctagaggcgc cgccgctcac ctgttccctt attcctggta caaaaacgcc 360
 acctacgctt gtttcgtgag caacctgaag gctgccgcag tgccaatctc ccatctcgag 420
 atcctgaaga aactgtctga gtacctgcag ctcgctggcg ccgccgcaat ttctccctct 480
 tacacttact atcgcaaagc tgccgctcaa tacagctggg ttgtgaacgg aactttcaag 540
 gctgccgcta aggtgttcgg atccctggct ttctgtaatg ccgccgcccc ctatgtgagc 600
 cggctgctgg gaattaatat tatgattggc cacctggctg gagtgaacct gctgacattc 660
 tggaaatcctc ctgtgattgt ctaccacact ctgcacgaaa gaaacgccgc cgccgagtat 720
 ctccagctca tgtttgggat caatagcatg ccaccccccg gcaccagagt gggggcagca 780
 gccgtcgtcc tgggcgtggg gttcgggata aacgcaatca tgccaaaggc cgggctgctg 840
 attaacaaga cataccaggg gtcctatggc tttaagaagg ccgcagctcg cgtgcgggct 900

-63-

atggctatct ataggaatgc agccgctaga tatgctcgcg acccacagcg gttcggcgca 960
gctgcaaagc tgtgccccgt gcaactctgg gtgtag 996

<210> 162
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 162

Ile Met Ile Gly His Leu Val Gly Val
1 5

<210> 163
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 163

Leu Leu Thr Phe Trp Asn Pro Pro Val
1 5

<210> 164
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2

<400> 164

Lys Val Phe Gly Ser Leu Ala Phe Val
1 5

<210> 165
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2

<400> 165

Val Val Leu Gly Val Val Phe Gly Ile
1 5

-64-

<210> 166
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

<400> 166

Ser Met Pro Pro Pro Gly Thr Arg Val
1 5

<210> 167
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

<400> 167

Lys Leu Cys Pro Val Gln Leu Trp Val
1 5

<210> 168
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 168

Lys Val Ala Glu Ile Val His Phe Leu
1 5

<210> 169
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 169

Lys Leu Ser Glu Tyr Leu Gln Leu Val
1 5

<210> 170
<211> 9
<212> PRT
<213> Artificial Sequence

<220>

-65-

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 170

His Leu Phe Gly Tyr Ser Ile Tyr Lys
1 5

<210> 171

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 171

Ile Ser Pro Ser Tyr Thr Tyr Tyr Arg
1 5

<210> 172

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens Her2

<400> 172

Lys Val Thr Asp Phe Gly Leu Ala Arg
1 5

<210> 173

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens Her2

<400> 173

Val Val Phe Gly Ile Leu Ile Lys Arg
1 5

<210> 174

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 174

-66-

Ser Ser Phe Ser Thr Thr Ile Asn Lys
1 5

<210> 175
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 175

Ile Val Tyr Pro Pro Leu His Glu Arg
1 5

<210> 176
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

<400> 176

Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Lys
1 5 10

<210> 177
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens p53

<400> 177

Arg Val Arg Ala Met Ala Ile Tyr Arg
1 5

<210> 178
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 178

Gln Tyr Ser Trp Phe Val Asn Gly Thr Phe
1 5 10

<210> 179

-67-

<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 179

Thr Tyr Ala Cys Phe Val Ser Asn Leu
1 5

<210> 180
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2

<400> 180

Pro Tyr Val Ser Arg Leu Leu Gly Ile
1 5

<210> 181
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens Her2

<400> 181

Arg Tyr Ala Arg Asp Pro Gln Arg Phe
1 5

<210> 182
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 182

Glu Tyr Leu Gln Leu Met Phe Gly Ile
1 5

<210> 183
<211> 9
<212> PRT
<213> Artificial Sequence

<220>

-68-

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 183

Ile Met Pro Lys Ala Gly Leu Leu Ile
1 5

<210> 184

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens p53

<400> 184

Ser Tyr Gly Phe Arg Leu Gly Phe Phe
1 5

<210> 185

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens p53

<400> 185

Thr Tyr Ser Pro Ala Leu Asn Lys Met Phe
1 5 10

<210> 186

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 186

Val Pro Ile Ser His Leu Asp Ile Leu
1 5

<210> 187

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 187

Ile Met Met Gly Val Leu Val Gly Val

-69-

1

5

<210> 188
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 188

Lys Val Ala Glu Leu Val Trp Phe Leu
1 5

<210> 189
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 189

His Leu Phe Gly Tyr Ser Asp Tyr Lys
1 5

<210> 190
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 190

Glu Tyr Leu Gln Leu Phe Gly Ile
1 5

<210> 191
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 191

Val Pro Ile Ser His Leu Gly Ile Leu
1 5

<210> 192
<211> 9

-70-

<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 192

Ile Met Ile Gly His Leu Val Gly Val
1 5

<210> 193
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 193

Lys Val Ala Glu Ile Val His Phe Leu
1 5

<210> 194
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens carcinoembryonic antigen

<400> 194

His Leu Phe Pro Tyr Ser Trp Tyr Lys
1 5

<210> 195
<211> 9
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 195

Glu Tyr Leu Gln Leu Met Phe Gly Ile
1 5

<210> 196
<211> 9
<212> PRT
<213> Artificial Sequence

<220>

-71-

<223> Synthetic peptide derived from Homo sapiens melanoma antigens

<400> 196

Val Pro Ile Ser His Leu Glu Ile Leu
1 5